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Note on the Mortality of Young Children

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8. In relation to phthisis the most important fact brought out is that the amount of this disease treated in the infirmaries and workhouses visited bears a definite ratio to the amount of phthisis in the population of the three parishes. In each case one third of the total amount of phthisis is segregated in these institutions.

Conclusion.

Incomplete and limited as is this investigation, it serves to show the great social and medical importance of the poor law infirmaries and workhouses of the Metropolis. They have to a considerable extent outgrown their original parochial restrictions, and have become, for the diseases not admitted to general charitable hospitals, the hospitals of the State. The facts here stated emphasize the necessity of an extensive and complete enquiry into the influence of disease on pauperism, and partly indicate the lines upon which such an enquiry might be conducted.

III.—*Note on the Mortality of Young Children.*

By Miss B. L. HUTCHINS.

THE death-rate of children under 5 in England and Wales fell from the 'sixties to the 'eighties of the nineteenth century, and then rose by 1·7 per cent.

Deaths per 1,000 Children under 5 years.

1861-70.	1871-80.	1881-90.	1891-1900.
68·60	63·38	56·76	57·74

In the same period the general death-rate fell 2·9 per cent. These figures relate to the whole country. In the selected healthy districts, on which the Registrar-General has made a special report¹, it appears, however, that not only has the general death-rate fallen, but the death-rate of children under 5 has also fallen.

Mean Annual Death-Rate per 1,000 in Selected Districts.

Persons.		Boys Under 5.		Girls Under 5.	
1881-90.	1891-1900.	1881-90.	1891-1900.	1881-90.	1891-1900.
13·82	12·97	39·70	37·96	32·38	30·77

¹ Decennial Supplement, 1891-1900, p. xxi.

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Some UNCONSIDERED FACTORS affecting the BIRTH-RATE.

By REGINALD DUDFIELD, M.A., M.B.

[Read before the Royal Statistical Society, 21st January, 1908.
The Right Hon. Sir CHARLES W. DILKE, President, in the Chair.]

IN December, 1905, two papers dealing with the decline in the birth-rate were read before this Society. In one, that by Drs. Newsholme and Stevenson,¹ standard rates were calculated and corrected rates derived therefrom for a series of years were compared. In the other, that by Mr. Udny Yule,² the effect on the birth-rate of the postponement of marriage was discussed. So far as I am aware, no one has estimated the absolute values of the potential fertilities resulting from the alterations in the age-constitution of the married population or of the decrease in the number of legitimate births resulting from "moral restraint." It is with this object in view that I have examined the changes which have taken place in

- (i.) the ages of married women ;
- (ii.) the combined ages of married couples returned as living together ; and
- (iii.) the excess of married women.*

The examination was limited to the fecund ages.

In selecting the standard fertility rates, I shall be obliged to criticise the data used by Drs. Newsholme and Stevenson. Such criticism is intended, however, only to demonstrate the unsuitability of the Swedish rates for my present purpose, for which I deemed *maximum fertility-rates* to be necessary. Those authors have shown in their Paper that their results are not affected by changes in the standard rates.

* The meaning attached to this phrase will be apparent on perusal of the section headed "Surplus Wives."

Infantile and Child Mortality in Selected Urban and Rural Counties, 1891-1900.
Rates per 1,000 Births.

Ages at Death.	Both Sexes.			Males.			Females.		
	England and Wales.	Urban Counties.	Rural Counties.	England and Wales.	Urban Counties.	Rural Counties.	England and Wales.	Urban Counties.	Rural Counties.
0—3 months	73·78	77·75	67·05	82·69	86·68	75·68	64·96	68·52	58·09
3—6 "	32·33	36·11	24·94	35·02	39·02	27·38	27·53	33·10	22·41
6—12 "	47·02	53·14	34·28	50·06	56·52	36·96	43·87	49·64	31·50
All under 1 } year	153·33	167·00	126·27	167·77	182·22	140·02	138·36	151·26	112·00
1—2 years	42·36	48·99	28·15	42·97	49·56	28·87	41·72	48·41	27·39
2—3 "	16·00	18·56	10·54	15·91	18·43	10·57	16·10	18·69	10·51
3—4 "	10·12	11·54	7·16	9·84	11·22	6·97	10·41	11·86	7·34
4—5 "	7·24	8·04	5·45	7·14	7·90	5·52	7·35	8·19	5·38

The foregoing table brings out several points. It shows first of all the facts that are already pretty well known: that the mortality of children is relatively heaviest in the earlier periods; that the mortality of boys is mostly heavier than that of girls; and the mortality in the urban districts heavier than that of the rural districts. A point of special interest as between the urban and rural counties is, however, that the difference in mortality, though well marked in the first quarter, tends to become later more accentuated. In the first quarter, the excess mortality in the urban counties is 16 per cent.; in the first year it is 32, in the second it is 74, in the third 76, in the fourth it is 61, in the fifth 47. It has been sometimes suggested that infantile mortality is a process of selection by which the weaker and less fit are weeded out. If that were so, the difference between healthy and unhealthy districts would surely tend to be compensated after infancy; the healthy districts would have a larger proportion of weak children surviving, and the unhealthy districts, where the struggle for existence had been more acute, would have become purged of its unfit, and the child mortality might be expected to approximate more closely than the infant mortality. This table shows, however, that where there is a high mortality of infants, there will be also a comparatively high mortality of the surviving children.

This table also shows that while the mortality of children in all the districts tends to fall from the first year onwards, the variations between different districts, so far from diminishing, are relatively greater after the first year. There is everywhere a steep fall; but the fall is greater in the healthy than in the unhealthy districts. It is bad enough that Liverpool should lose twice as many of its infants under 1 year as does Uppingham; but it is almost more startling to find that, in the second year, Liverpool loses *more than four times* the proportion of Uppingham.

Deaths of Children Under 5 in Certain Districts.

Registration District.	Deaths Under 1 Year per 1,000 Births.	Deaths per 1,000 Population Aged				Under 5 Years.
		1—2 Years.	2—3 Years.	3—4 Years.	4—5 Years.	
Ten districts with high infantile mortality—						
Liverpool	223	139·2	32·4	28·3	19·4	114·6
Preston	220	70·0	27·5	15·5	10·9	84·5
Manchester	211	113·4	40·7	24·9	15·3	99·5
Stoke-on-Trent	210	75·0	28·3	19·6	14·0	85·8
Salford	206	98·3	38·6	23·1	16·9	91·9
Merthyr Tydfil	202	75·6	30·6	19·0	14·2	85·0
Birmingham	200	78·8	32·3	19·3	13·5	83·5
Blackburn	186	75·7	25·9	16·2	11·6	73·6
Sunderland	176	74·1	29·7	16·4	12·5	72·8
West Ham	158	53·3	20·7	13·2	10·0	56·8
London	160	68·1	27·0	17·5	12·4	66·8
England and Wales	153	54·7	20·3	12·9	9·3	57·7
Four districts with low infantile mortality—						
Uppingham	105	29·9	9·0	5·6	2·7	32·5
Hambledon	88	23·4	9·4	5·2	5·1	27·5
Shaftesbury (Dorset)	85	15·9	5·6	6·1	4·9	24·8
Devizes	83	32·1	12·4	9·0	5·8	29·9

The wide range of variation in the death-rate from 1 to 5 years will be seen more concisely in the following table. It is also remarkable that while the infant death-rate of many of the industrial towns is not far short of that of Liverpool, which heads the list, yet their death-rate for the period 1—5 years is considerably lower.

Deaths of Infants and of Children 1 to 5 years, 1891-1900, in Certain Districts, in order of the Children's Death-Rate.

	Deaths of Infants per 1,000 Births.	Deaths of Children per 1,000 Aged 1—5.		Deaths of Infants per 1,000 Births.	Deaths of Children per 1,000 Aged 1—5.
Liverpool	223	59·2	London	160	31·3
Manchester	211	48·8	Preston	220	31·2
Salford	206	39·5	England and Wales	153	24·3
Birmingham	200	36·0	West Ham	158	24·2
Stoke-on-Trent	210	34·7	Devizes	83	14·5
Sunderland	176	33·1	Uppingham	105	11·3
Blackburn	186	32·5	Hambledon	88	10·6
Wolverhampton	188	31·6	Shaftesbury	85	8·1

The following table represents an attempt to discover some of the chief causes of the deaths of children aged 1 year and under 2 :—

Deaths of Children Aged 1 to 2 Years from Certain Causes in some Districts, and in England and Wales.

	All Causes.	Measles.	Whooping Cough.	Diarrhoea and Dysentery.	Phthisis and other Tubercular.	Respiratory Diseases.
Uppingham	29·9	0·5	4·5	0·9	3·2	11·4
Devizes	32·1	4·9	2·0	0·5	0·7	11·1
Hambledon	23·4	2·5	3·6	0·5	1·8	8·4
England and Wales	54·7	7·1	4·9	4·0	3·6	17·0
West Ham	53·3	7·0	5·3	4·1	3·4	16·1
Liverpool	139·1	13·2	11·9	17·3	6·9	42·6
Salford	98·3	16·4	9·1	10·4	8·1	25·4
Manchester	113·4	19·5	9·1	14·7	6·0	33·8
Blackburn	75·5	12·4	5·3	6·2	3·6	23·6
Preston	70·0	12·0	5·4	7·7	4·1	19·9
Stoke-on-Trent	75·0	12·3	5·0	4·7	4·0	21·2
Birmingham	78·8	8·5	8·1	6·3	3·9	25·3
Sunderland.....	74·1	9·0	5·2	8·8	5·0	22·8
Merthyr Tydfil	75·6	10·2	4·3	4·2	5·0	25·5

IV.—*Bibliography of the Prices of Cereals. Presented by the Royal Statistical Society to the International Statistical Institute at the Copenhagen Congress, August, 1907.*

AT the Congress of the International Statistical Institute, in 1905, the Economic Section, on the proposition of M. Béla Földes, expressed a wish, confirmed at a full sitting of the Institute, that the Royal Statistical Society of London should undertake the preparation of a bibliography of the prices of wheat and other cereals. It was intended, apparently, that the list of works should be confined to those actually in the Society's Library, but in the course of preparation it was found that this collection is by no means complete, and that the utility of such a catalogue would be much enhanced by the inclusion of other publications bearing on the subject, those contained in the Library being distinguished by an asterisk. Even thus extended, the bibliography does not cover the whole field of information. It contains most of the standard and special works, as well as a good many others to which price-tables are appended. Statements of average or general prices, too, have been supplemented by reference to those relating to single markets, especially if carried over a long series of years. The periodical publications of scientific societies, statistical or agricultural, and journals which in nearly all countries publish valuable records of prices at comparatively short intervals, such as those prepared by Mr. Sauerbeck, with a few exceptions, are not entered. It is hoped, however, that, on the whole, the